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Increasing Access to ABA Intervention for Children with Developmental Disabilities in Taiwan

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University of San Francisco

**Increasing Access to ABA Intervention for Children with
Developmental Disabilities in Taiwan**

A Field Project Presented to
The Faculty of the School of Education
International and Multicultural Education Department

In Partial Fulfillment of the Requirements for the Degree
Master of Arts in International and Multicultural Education

By
Noel Hsu
May 2017

Increasing Access to ABA Intervention for Children with

Developmental Disabilities in Taiwan

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in
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Under the guidance and approval of the committee, and approval by all the members, this field project has been accepted in partial fulfillment of the requirements for the degree.

Approved:


Instructor/Chairperson



Date

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Abstract

Applied Behavior Analysis (ABA) uses a behavioral approach to help clients and their behavioral challenges. This treatment has been proven to be a highly effective intervention for children with developmental disabilities, such as autism spectrum disorders. It is widely practiced in the United States and many other developed countries; however, this intervention is not widely available in Taiwan. This phenomenon requires our investigation because it raises questions about the available supports and interventions for children with special needs in Taiwan. This project is to explore factors that influence the development of ABA intervention in Taiwan. The goal of this project is to come up with recommendations that target current obstacles for Taiwanese government, ABA organizations as well as educational institutions to adopt for increasing the access to ABA treatments for children with developmental disabilities in Taiwan.

CHAPTER I

INTRODUCTION

Statement of the Problem

While working as a behavioral interventionist at several Applied Behavioral Analysis (ABA) service centers, I saw that my clients with developmental disabilities showed tremendous improvements in their behaviors after receiving their early ABA interventions. Seeing these positive changes in my clients, I began to wonder if the same treatment is also helping the children with developmental disabilities in Taiwan. After brief investigation and several conversations with my director from work, I learned that ABA treatment was not widely available in Taiwan. Only a few ABA service agencies were available, and people with developmental disabilities rarely seek such treatment.

Through learning about the phenomenon, it raises my concerns about the support available in Taiwan for children with special needs, such as do the children receive the treatment they really need? Do they get adequate support? And why is ABA not common in Taiwan? Both of my experience and knowledge about ABA interventions tell me that ABA is an essential and effective treatment for children with developmental disabilities. Children will gain benefits from this treatment, but why is there a limited access to such treatment in Taiwan? This problem requires our investigation because these children deserve the treatment they need. The limited availability of ABA intervention in Taiwan is problematic because it can impede these children to achieve a better quality of life.

Purpose of the Project

The purpose of this project is to develop a brochure that provides recommendations for increasing the access to ABA service for children with

developmental disabilities in Taiwan. The intended audience of this brochure is the Taiwanese government, especially the Ministry of Health and Welfare in Taiwan, ABA organizations and service providers, and educational institutions. It is important to address the issue and recommendations to this audience because they have the resources and abilities to improve the current situation in Taiwan. ABA intervention is still in the infantile phase, and the majority of the people in Taiwan do not know about this service; therefore, it needs help from entities that are influential and authoritative. We need ABA organizations and services providers to use their professional knowledge and ideas for raising the awareness of ABA intervention in Taiwan. We need the government to take actions in regards to the need for ABA intervention. We also need educational entities to prolong the lifetime of ABA intervention in Taiwan. Therefore, this project and brochure are developed for them with an intention of consolidating them to work together for bringing a promising outcome to children with special needs in Taiwan.

Theoretical Framework

In Critical Disability Theory (CDT), disability is not merely the biological impairment; it is rather a complex experience from the interrelationship between the impairment of the individual and the society's response to this 'disability' (Hosking, 2008). For example, the current policies for disable children in Taiwan have failed to provide sufficient supports for these children, which prolonged or exacerbated the disadvantages these children experienced. CDT theorists argue that everyone is accountable for the individual's disability; therefore, we all have the responsibility to help the person to overcome his or her difficulties.

Another theory is intersectionality, which is the idea that everyone has multiple

identities (Hosking, 2008); hence, we all experience differently in our society. This points out why some children face more disadvantages than others. For instance, children who seek ABA treatments may share one identity, which is their developmental disability, but they all have other identities that allow them to receive better or worse treatments than others. For example, the wealthy children tend to get better treatment because they can afford the expensive cost of the ABA intervention, whereas the poor children's needs often are neglected in society since they cannot afford the treatment.

By using both theories to analyze the unjust problem in our society, we recognize the urge to transform our system. Therefore, it is critical for the government in Taiwan to take actions in bringing equality into the system, where all children's needs are met regardless of their socioeconomic status and other identities.

Significance of the Project

As in the United States, there is a rapid growth of population with ASD diagnosis in Taiwan (Ministry of Health and Welfare, 2014). It was 6185 people with ASD in 2006, and the number has increased to 13340 in 2016. There are 21,749 children with developmentally delayed disorder reported to early intervention services in 2016. 8112 children at the age of 17 or under have Autism Spectrum Disorder (ASD), which is more than half of the total population of people with ASD in Taiwan (Ministry of Health and Welfare, 2016). Therefore, there is a rising demand for effective treatments for children with developmental disabilities. Since ABA has been proven to be a highly effective treatment; it is important to figure out the factors that prevent the growth of ABA intervention in Taiwan.

Definition of Terms

Applied Behavior Analysis (ABA) is a behavioral approach to improve individual's quality of life by reinforcing their socially significant behaviors and decreasing problematic behaviors.

Autism Spectrum Disorder (ASD) is a developmental disorder. Individuals with ASD usually experience challenges in social and communication skills. They also show repetitive behaviors and sometimes problematic behaviors.

Board Certified Behavior Analyst - Doctoral (BCBA-D) is a professional who holds a doctoral degree and has passed ABA exam for BCBA level. This is the highest level in the hierarchy of behavior analyst. BCBA-D can provide ABA intervention independently and supervision to BCaBA, Registered Behavior Technicians (RBT), and therapists.

Board Certified Behavior Analyst (BCBA) is a professional who holds a graduate degree and has passed ABA exam for BCBA level. BCBA can provide ABA treatments independently and can supervise BCaBA, Registered Behavior Technicians (RBT), and therapists.

Board Certified Assistant Behavior Analyst (BCaBA) is a professional who holds a bachelor's degree and has passed ABA exam for BCaBA level. BCaBA must be supervised by BCBA or BCBA-D. BCaBA can supervise RBTs and therapists.

National Health Insurance (NHI) is a universal health system in Taiwan. A study shows that there is an approximately 98.7% of children under 19-year-old have NHI (Chen, Liu, Su, Huang & Huang, 2008).

CHAPTER II

REVIEW OF THE LITERATURE

Overview

Applied Behavior Analysis (ABA) intervention is widely practiced in the United States to treat children with developmental disorders. It has been proven by an extensive body of literature to be a highly effective treatment for improving social and adaptive skills as well as decreasing problematic behaviors of individuals. However, this intervention is rare in Taiwan, and not many people are seeking help from this treatment. In this chapter, we explore literature that provided empirical evidence to several different themes, such as ABA intervention and the recognition of ABA treatment in California, Taiwanese's cultural aspects about psychological and behavior treatments, the developments of early intervention and special education in Taiwan. Learning about this information provides a foundational knowledge about the phenomenon of ABA treatment in Taiwan.

Applied Behavior Analysis

Applied Behavior Analysis is the science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change. (Cooper, Heron & Heward, 2007, p.20).

Baer, Wolf, and Risley (1968) published the first journal that defined ABA. In their study, they found seven characteristics of ABA: applied, behavioral, analytic, technological, conceptually systematic, effective, and generality. These seven dimensions demonstrate that Applied Behavior Analysis (ABA) comes from the principles of

behaviorism, and its procedure must be clear enough that allows others to replicate it.

ABA focuses on the functional relationship of behavior and its environment. It only uses evidence-based methods to systematically alter the environment of the behavior for reinforcing socially significant behaviors or eliminating problematic behaviors, such as self-harm behaviors. ABA helps the individual to achieve a significant outcome, and the behavior change will still occur if the behavior is in a different context (Cooper, Heron & Heward, 2007, p.20). In addition to its usefulness in treating children with special needs, it is also frequently used to improve learners' skills in educational contexts or to increase the performance of the workers in workplaces (Martinez-Diaz & Wine, 2013).

Applied Behavioral Analysis (ABA) has been proven to be a highly effective intervention for children with developmental disabilities (Cernius, 2016; Hansel, 2013). Dr. Ivar Lovaas was a behavioral psychologist and pioneer in utilizing ABA technique to alliterate problematic behaviors and improve social and communication skills of children with Autism Spectrum Disorder (ASD) (Lovaas, 1987). In his influential study, Lovaas (1987) found that nearly half of the subjects with ASD achieved their normal functioning level after receiving extensive ABA therapies, and 89% of the subjects showed noticeable improvements in their behaviors. Dr. Lovaas's findings brought hopes to many parents of developmental delayed children, leading a high demand for ABA intervention from parents of children with special needs in the United States.

Senate Bill 946

The successful outcome of Lovaas's (1987) study raised much demand for this therapy among families of children with developmental disabilities. Due to its labor-intensive nature as well as the requirement of extensive treatment hour for each client, the

expensive cost of ABA treatment could be a financial burden for a lot of families. (Feinberg & Beyer, 1998). The cost of ABA therapy for each child currently ranges from \$30,000 to \$100,000 per a year (Cernius, 2016). Therefore, many families cannot afford or had to rely on health insurance to lighten the cost for them. However, most of the health insurance companies did not cover this treatment because they claimed ABA is experimental and not medically necessary (Feinberg & Beyer, 1998).

In California, there were lawsuits against insurance companies from the parents of children with special needs in the early 2000. Although some parents were able to prove the necessity of such treatment for their children and won the cases, the result only allowed coverage for their own children. A great number of children with special needs were still lacking financial support for getting the intervention they needed. Hence, Senator Sternberg began drafting Senate Bill 946, which was to mandate all health insurance companies to cover ABA treatment in their insurance policy for all children with developmental disabilities in California (Cernius, 2016). After years of contesting between the insurance companies and ABA advocates and parents, SB 946 finally was signed into law by Governor Brown in 2011 and was ready to be implemented in 2012 (Cernius, 2016). Because of this law, children with special needs in California could finally receive ABA intervention without getting a heavy financial burden to their families. This law facilitated the growth of ABA service centers in California and helped numerous families of children with developmental disabilities.

Cultural Beliefs

In Taiwan, there is a famous old saying, “Great minds mature slowly,” that many parents of children with developmental disabilities often used to explain the delayed

development in their children (Lin, Tsai, & Chang, 2007; Ferko, Jung, & Huang, 2008). Due to this belief, many parents think their children will eventually behave like other typical children; thus, they do not seek help for their children until they begin to observe severe problem behaviors of their children. Even if the parents recognize their children's delayed development, many of them tend to deny seeking help for their children because they are afraid of being stigmatized by the public for having a child with special needs. In Taiwanese cultural and most Asian cultures, children with disability is often perceived as a failure in the family, and they are usually attributed to the consequence of the sin that is made in their previous generation (Ferkko, Jung, & Huang, 2008). Due to this belief, many parents often keep their children in their homes and rarely talk about their children with others. Hence, they deny seeking helps from professionals for their children.

Since the past decades, the Taiwanese government has been proactively developing its special education system as well as intervention for raising the awareness of these children's needs (Ferkko, Jung, & Huang, 2008). Their action helped to build more acceptance for children with disabilities in Taiwan. People also began to recognize the significance of special education and professional interventions for children with special needs. In one recent study, the researchers were examining the difference in beliefs about early intervention between Taiwanese and Taiwanese American (Ferkko, Jung, & Huang, 2008). The results showed both groups strongly disagreed that having a child with disability in the family was shameful and a consequence of the sin from the elder generation. Moreover, Taiwanese participants think children with disabilities will make a significant improvement if treated with early intervention and are supportive of the use of early intervention services.

These findings contradict the traditional beliefs and show that a growing acceptance for children with special needs. Furthermore, their parents are becoming more willing to seek interventions for their children.

Special Education and Early Intervention

Since 1980, the Taiwanese government has been diligently developing welfare policies for individuals with special needs, such as establishing special education program and promoting various types of interventions (Ferko, Jung & Huang, 2008). In 1987, Taiwan established its first legislation for special education. This law provided special education to children with disabilities. However, special education was not required for children with special needs until the introduction of Child Welfare No. 13, 23, and 42, which is to ensure all children with special needs attend school from age of three (Ferko, Jung & Huang, 2008).

Under the influence of grassroots organizations and advocates' endeavors to promote early intervention in Taiwan, the Taiwanese government recognized the significant benefit that early intervention can bring to children with special needs and their parents. According to a study done in the United States, it was found that children who received early interventions at the age of three or younger would save more than 6,000 dollars per year for educational cost in their future (Chu, 2007). Moreover, a similar result found in research conducted by Garland, Stone, Swanson, and Woodruff (1981) showed that children who received early intervention at their birth would only needed to pay 37,600 New Taiwanese Dollars (US\$ 1251.6) for their educational cost; 46,816 New Taiwanese Dollars (US\$1558.38) for children who receive early intervention over age of two, and 53,340 New Taiwanese Dollars (US\$1775.54) for children over age

of six. By looking at the trend of the educational cost at different ages, it is clear that children who receive early and intensive ABA intervention at young age needed less special services in the future. The results demonstrate early intervention do not only improve children's quality of life but also alleviate their families' financial burdens from the cost of ABA therapy.

In 1990s, early intervention was included in the article, "Protection of Children and Youths Welfare and Rights Act" (Kuo, Muo, Chang, & Lin, 2015). The Taiwanese government established child development assessment centers and clinics to assess and provide early interventions. It also set up a subsidy program for encouraging children with special needs to receive early interventions (Ministry of Health and Welfare in Taiwan, 2007). However, the Taiwanese government only considered speech therapy, occupational therapy, physical therapy, and psychological therapy as early interventions. ABA therapy is not provided in the clinics nor subsidized by the program. As a result, parents could only seek ABA treatment from private ABA services providers. Due to the fact that only few ABA services providers are available in Taiwan as well as the expensive cost of the treatment, most children with disabilities cannot gain access to this highly effective intervention.

Summary

ABA intervention is scientifically proven to be a beneficial and effective treatment for children with developmental disabilities. The seven characteristics of ABA demonstrate that this intervention is highly reliable. ABA only uses evidence-based methodologies to improve behavior's socially significant behaviors and decrease their problematic behaviors. It also ensures that behavior change is generalized across various

settings and maintained for a long period of time. Due to the promising findings in literature about ABA, demand for such treatment has been raised. However, its high cost and the exclusion from insurance coverages prevent a large number of families to seek help from this therapy. Fortunately, some states in the United States have established new laws to enforce the coverage of ABA service for children with disabilities, such as Senate Bill 946 in California.

On the other hand, children in Taiwan are still battling to access ABA treatment. In recent decades, the Taiwanese government recognized the advantages that early intervention can provide to children with special needs and their families; therefore, it has been promoting early intervention in the country. The government has set up assessment centers, clinics and subsidizing program for these children, but ABA treatment is not included in the programs. As a result, only a few available ABA private services providers in Taiwan have become the only resources that provided such treatment. With this limited access to ABA treatment, most children with disabilities in Taiwan cannot getting treated by this highly effective treatment, which may impede them to reach a better quality of life. Therefore, it is essential for us to delve into this problem and generate recommendations for increase the access to ABA intervention in Taiwan.

CHAPTER III

THE PROJECT AND ITS DEVELOPMENT

Description of the Project

The purpose of this project was to explore the factors that influence the development of Applied Behavioral Analysis (ABA) treatment in Taiwan. The goal of this project was to come up with recommendations that target current obstacles for the government in Taiwan and ABA-related entities to adapt for increasing the access to ABA treatments for children with developmental disabilities. The product of this project is to create a brochure that includes recommendations for the Taiwanese government, ABA organizations and centers, and educational entities.

Development of the Project

The project began with recognizing the problem. Through my experience as a behavioral therapist, I observed the efficacy of ABA intervention for children with developmental disabilities, and its growth in California. I noticed an increasing trend of ABA service centers as well as greater demand for such treatment. Nonetheless, this trend is less available in Taiwan. This drew my attention to the development of ABA therapy and the available intervention for developmentally delayed children in Taiwan. Hence, in the next step, I conducted a literature review. In this way, I was able to paint the picture of the phenomenon and head to the right direction for further investigation of the problem.

The third step was to delve more deeply into the problem. In order to get information at this depth, I conducted interviews with people who work in the ABA industry in Taiwan. The interviewees are founders of two different ABA programs in

Taiwan. Both provided valuable information about obstacles and factors that impacted the growth of ABA intervention in Taiwan. Their analyses did not only help me to obtain a clear picture about the reasons why ABA intervention was not pervasive in Taiwan, but also offered me ideas for developing recommendations for the problem.

The last part of this project was to come up recommendations for the problem. Through understanding the perspectives of my interviewees, I was able to develop recommendations that best fit Taiwan's situation. After I developed the recommendations, I consolidated them with the description of the problem into a brochure, which fulfilled the goal of this project.

The Project

The product of this project was to create a brochure for the Taiwanese government, ABA organizations and centers, and educational entities. The content of the brochure includes a description of the issue, the goal of this brochure, important facts about the phenomenon, the obstacles that persist the problem, the recommendations, a letter from the author, and a reference page. The project is attached in the Appendix section.

Results from Interviews

Both of my interviewees did not agree with Taiwan adopting a similar insurance coverage policy that California government implemented in 2012. Their concerns include the potential effect of insurance policy on the quality of the treatment and the current quality of the therapists. In the conversation with Teacher Jin Xin, she mentioned that it is not wise for the National Health Insurance (NHO) to cover the cost of the treatment because most of the therapists and analysts do not have sufficient practical training and

this will affect the quality of the treatment (Jin Xin, personal communication, March 20, 2017). She believes that there is a need to improve the quality of the therapists before enforcing NHO to cover the cost of the treatment. On the other hand, Dr. Yuen thinks that the quality of the treatment will be affected if it is covered by the NHO. She said that there are so many restrictions for the therapies that are covered by NHO. For example, NHO covers occupational therapy, and it only allows 30 minutes for each treatment session, which is too short for the therapist to fully conduct therapy to a client. This is not going to work for ABA therapy because one of its principles is the density of the treatment sessions. ABA intervention requires extensive treatment hours for every client; therefore, the restriction of 30 minutes treatment is not going to make any observable improvement. This restriction prevents the clients from reaching the full potential benefits from getting ABA treatments.

Due to the little availability of ABA intervention as well as the difficulty of getting this treatment in Taiwan, both interviewees have practiced various strategies to disperse the knowledge about ABA interventions. For instance, they all have written books and given speeches about this intervention to parents, medical professionals, educational professionals, and anyone who is curious about ABA (J. Xin, personal communication, March 20, 2017; L.Yuan, personal communication, March 5, 2017). Through this way, they impart knowledge about ABA to a greater variety of audience. In result, this helps to promote ABA intervention in Taiwan. Another important way is to provide parent training classes. They believe that teaching parents about the efficacy and methods of ABA will allow them to develop a better parenting skill. For example, they will have an idea on how to reinforce desired behavior and decrease problematic

behaviors of their children. Parent training classes will also ease the problem of children not receiving enough treatment hours. Since their parents now know how to teach them in ABA way, these children will be intervened by ABA methodology at home. This fulfills the ABA requirement of high density for treatment sessions to some extent. However, the at-home intervention by the parents still needs to be carefully monitored by ABA professionals. This is why in their parent training classes, they provide supervision every week to make sure that parents perform ABA correctly.

Through their perspectives, we can see Dr. Yuan and Teacher Jin Xin's endeavors to enhance and promote ABA intervention in Taiwan. However, we need more people to contribute to the transformation. There are many problems with the current ABA industry in Taiwan, and they need more than ABA professionals to solve the problems. They actually require collaborations of people from different areas. For example, the problem of the quality of therapists. To successfully eradicate this problem, we must have ABA organizations educational institutions and the government to work together for coming up solution plans to ensure the quality of therapists. Furthermore, Dr. Yuan also talked about the problem of misconception about ABA among the public, which impeded many parents to seek help from ABA services for their children. Teacher Jingxin spoke about the high cost of the treatment that many families could not afford. Hence, to adhere the goal of this project, recommendations will be developed for targeting the quality of therapists, the misconception about ABA intervention, and financial support for ABA treatment.

Recommendations

1. Promote accurate information about ABA intervention

Dr. Yuan talked about the misconception about ABA intervention in Taiwan.

“There are some parents have a false belief about ABA treatment. Such as ABA therapy is for training animals and it only uses food to reinforce desired behaviors” (L.Yuan, personal communication, March 5, 2017). These misconceptions come from improperly trained therapists, unprofessional teachers, and medical doctors.

ABA professionals and organizations should proactively reach out to the public and deliver accurate information about ABA intervention. This can be done by holding conferences and giving speeches about ABA intervention. It is critical to educate the public about ABA therapy as well as its efficacy because this will clarify their misunderstanding about the intervention as well as encouraging them to seek such service. It is also important to disperse accurate knowledge about ABA therapy to educators and medical professionals because gaining their supports will help the government to recognize the significance of ABA intervention. Ultimately, this will facilitate the growth of ABA therapy in Taiwan In addition, ABA service organizations should ensure their therapists are properly trained for designing and implementing behavior treatments that meet their patients’ needs.

2. Enhance the quality of therapists

According to Dr. Yuen, “a lot of therapists have the knowledge but do not have enough experience; therefore, many of them have told me that their real learning began on the first day of their work” (L.Yuan, personal communication, March 5, 2017).

Teacher Jin Xin has a similar reaction about the quality of Board Certified Behavior Analysts(BCBA), Board Certified Assistant Behavior Analysts (BCaBA) as well as therapists in Taiwan. She says, “Dr. Yuen is the only BCBA in Taiwan that has 5 years of

practical training as a special education teacher in the U.S., in which she earned her accumulated 1500 experience hours for meeting the requirement of BCBA exam. Unlike Dr. Yuen's experience, BCBAs and BCaBAs in Taiwan usually take online ABA courses and get their 1500 hours of training at a service center. They rarely have an opportunity to be trained in a school context where they can experience a more comprehensive system" (Jin Xin, personal communication, March 20, 2017). From sharing their perspectives, it is clear that most therapists and behavior analysts in Taiwan have inadequate experience. This fact influences the quality of the treatment and creates misconceptions about ABA therapy among the public.

Most of the ABA therapists in Taiwan have received around 40 hours of practical training in a period of three to six months. In order for them to gain experience with treating various types of problem behaviors and individuals with different diagnoses, they usually spend very little time on each case. This prevents them from developing a thorough understanding of the individual, it also limited their opportunities to practice their knowledge and techniques.

The ABA preparatory programs should provide their students with extensive training opportunities for strengthening their skills and knowledge. The training hours should be at least 40 hours per month and last for a semester. The training needs to be conducted in various settings as well as with individuals who have different needs. ABA service organizations and educational institutions should work together to come up a curriculum that strictly focuses on building students' practical skills. Moreover, the Ministry of Health and Welfare should develop an evaluating system that oversees the quality of service and enforce the service center to meet the standard.

3. Include ABA intervention in the subsidy program

Teacher Jin Xin talked about one of the reasons that prevented people from seeking this service is because of the expensive cost of the treatment. According to Dr. Yuan, the cost of ABA ranges from NT\$400 to NT\$1500 per hour (US\$13-50/hour) in Taiwan. And each case usually requires at least six session hours per week. Hence, this could be a financial burden for many families.

The Ministry of Health and Welfare should include ABA intervention in their early intervention subsidy program because ABA has been proven to be a highly effective intervention for treating children with developmental disabilities; it is strongly recommended for children to begin their treatment as young as possible. The younger the children receive this treatment, the better the outcome will be. If ABA intervention is subsidized by the program, this will greatly help many families with developmentally delayed children and will also encourage these children to seek help from ABA intervention.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Due to the growing diagnoses of children with developmental disabilities, treatments and teaching strategies for improving wellness of these individuals have been an important focus in the medical and educational fields. ABA intervention has been broadly researched and proved to be a highly effective treatment for children with developmental disabilities. This intervention is widely practiced in the United States, and the demand for such treatment is still increasing. However, ABA intervention is not common in Taiwan. The Taiwanese government has been actively promoting special education as well as early intervention for children with special needs because it has recognized the significance of both approaches; however, ABA intervention is not included in the promotion. This has raised concern about the adequacy of support provided for children with disabilities in Taiwan.

This project investigated the issue through conducting a literature review as well as interviews with ABA professionals in Taiwan. The literature review provided a foundational knowledge about ABA intervention as well as the development of welfare policies for helping children with special needs in Taiwan. The interviews provided in-depth information about the lack of ABA intervention in Taiwan and gave recommendations for improving the problem. Lastly, recommendations were integrated into a brochure for the government, ABA organizations and service providers, and educational institutions in Taiwan.

It is critical for us to take action to help these children because we all have the

responsibility to provide a supportive environment for people with disability. In CRT, disability is socially constructed (Hosking, 2008). This means our environment determines our ability. When these children cannot access the intervention they need, they are categorized into the disability box. To help them to become able-bodied, we need to work together to eliminate the factors attributed to the limited availability of ABA service in Taiwan. For example, ABA organizations and educational institutions need to design better curricula for training therapists and behaviors analysts to improve the quality of the treatments. This would help to reduce misconceptions and increase demand for the intervention. When the demand increases, the government hopefully will begin to see the need for such treatment in Taiwan. As a consequence, this will help the growth of ABA industry. Ultimately, it will benefit children with special needs. Therefore, everyone is responsible for keeping this society free of discrimination, in which people with disabilities are able to exercise their rights fully and have their needs met.

Recommendations

From learning about the process of establishing SB 946 in California, we see reform is a long journey of contesting and lobbying. SB 946 began with parents of the children and grassroots organizations working together to advocate the need of children with special needs (Cernius, 2013). Their endeavors gained support from senators and politicians, which led to raising awareness among the public about the issue. Taiwan should adopt a similar strategy for enhancing the access to ABA intervention.

The brochure is the starting point of the journey. It functions as a guide book for organizations and the government to understand and realize the problem. It also provides

recommendations for what they should do to reach their goal. It emphasizes that every audience has the responsibility to improve the situation; therefore, ABA organizations or organizations for children with disabilities and parents of these children should collaborate for enhancing access to ABA intervention in Taiwan.

The first step is to distribute the brochure to all aforementioned audiences. The second step is to hold meetings with parents, ABA organizations and centers, and other organizations for children with disabilities. The purpose of the meeting would be to discuss plans for enforcing the government and educational institutions to take actions on the proposal. In California's insurance reform, grassroots organizations gained support by "adding like-minded partners" (Cernius, 2013, p.587). This can be done through firstly promoting and teaching the society about this issue and secondly alluring people to join the advocacy. In order to educate the public, we can broadcast the problem and the significant of ABA intervention on TV, radio stations, web pages, and social media platforms. Once they learn about ABA, we can have them participate in advocacy by providing simple ways that they can do to improve the issue. This can be asking them to like a Facebook page for promoting ABA, to share a tweet about ABA in Taiwan on tweeter, or to send a letter to the government or politicians in regard to the need to address this issue. We can provide several templates of the letter on the website, so they do not need to create their own.

The third step happens after the campaign grows. With the increasing pressure from the development of supporters, the government will feel the need to step in and address the issue. We will team up with politicians and deliver the recommendations to the government. We will demand response from the government in regard to the

implementation of the recommendations. However, if there is a need for modification of the recommendations, we are open to discuss and make improvements.

This project centered around perspectives of ABA professionals. We face a lack of gathering perspectives from parents with special needs as well as perspectives of the government. Therefore, to further develop this research, researchers should collect more information about the parents and the government. In future research, researchers can also interview therapists who have received their education in Taiwan; this would help in understanding their needs and developing the best possible solution for strengthening their school experience. Lastly, there is a limited amount of literature on ABA intervention in Taiwan. It would be beneficial if some future research could focus on the effectiveness of such treatment on Taiwanese children with disabilities because factors such as culture and race may attribute to the reason why ABA treatment is less available in Taiwan.

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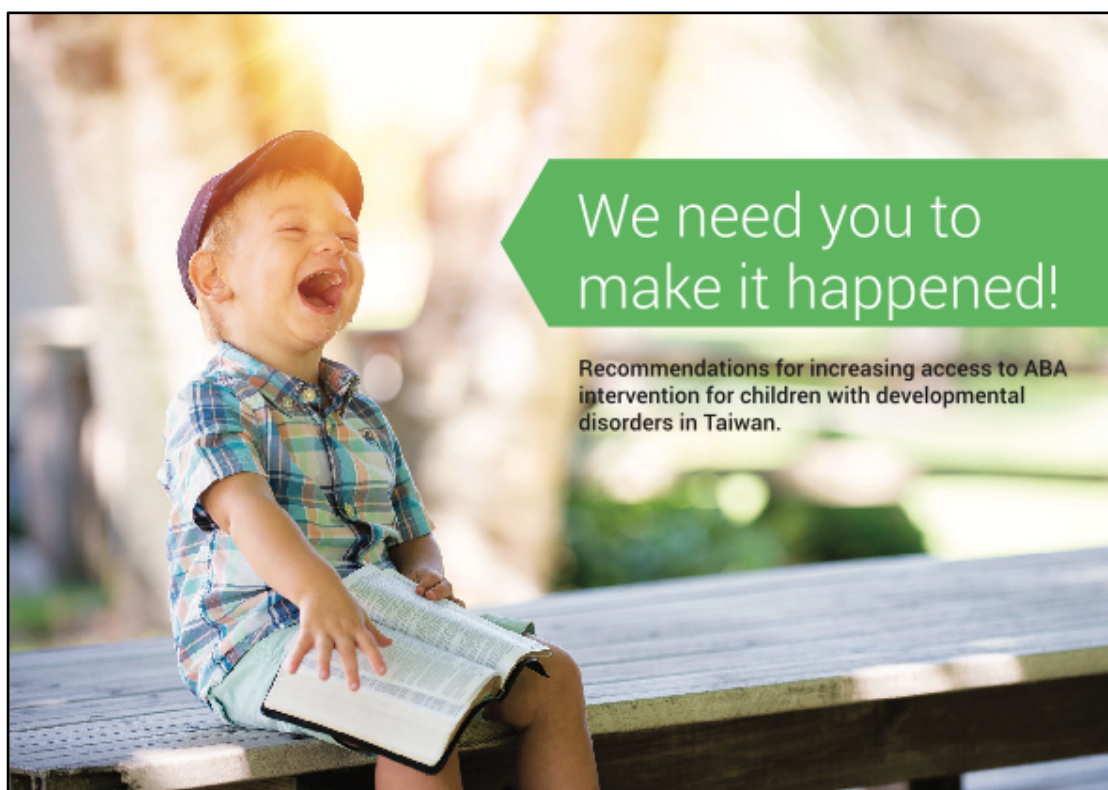
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Appendices

Recommendations for Increasing Access to ABA Intervention for Children with Developmental Disabilities in Taiwan.

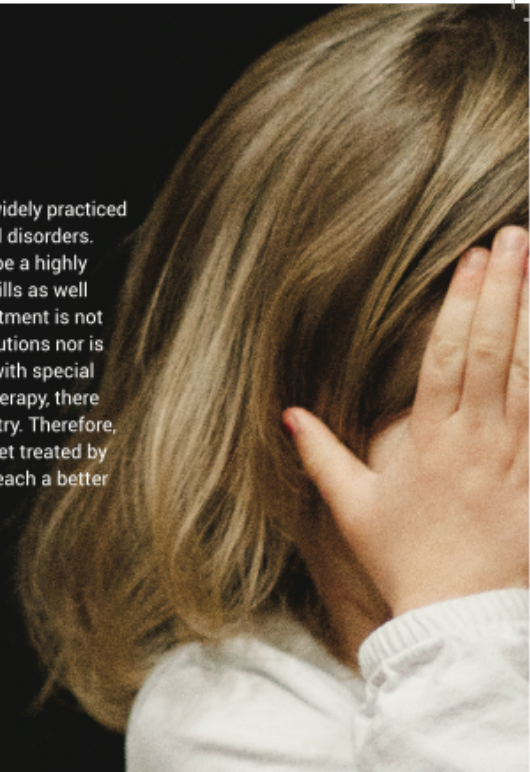
Appendix A

The Brochure



THE ISSUE

Applied Behavior Analysis (ABA) intervention has been widely practiced in the United States to treat children with developmental disorders. It has been proven by an extensive body of literature to be a highly effective treatment for improving social and adaptive skills as well as decreasing problematic behaviors. However, this treatment is not recognized in Taiwan. It is not provided in medical institutions nor is included in government's subsidy program for children with special needs. And even if people want to seek help from this therapy, there are only few ABA service providers available in the country. Therefore, most of the children with disabilities in Taiwan cannot get treated by this highly effective treatment, and it impedes them to reach a better quality of life.



THE GOAL

The goal of this proposal is to provide recommendations for increasing access to ABA intervention for children with developmental disabilities in Taiwan.





What is ABA intervention?

Applied Behavior Analysis (ABA) focuses on the functional relationship between behavior and its environment. It only uses evidence-based methods to systematically alter the environment of the behavior for reinforcing socially significant behaviors or decreasing problematic behaviors such as self-harm behaviors. Each behavior treatment plan is individualized to best fit the patient's needs. In addition to its usefulness in treating children with special needs, it is also frequently used to improve learners' skills in educational contexts or to increase workers' performance in a workplace.



THE FACTS

There is a rapid growth of children with developmental disorders in Taiwan. In 2016, there are 21,749 children with developmentally delayed disorder reported to early intervention services. 8112 children at the age of 17 or under have Autism Spectrum Disorder (ASD), which is more than half of the total population of people with ASD in Taiwan (Ministry of Health and Welfare, 2016).

"Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning and appropriate social behavior" (Surgeon General 2000, P.5).

In 1995, the Taiwanese government passed Child Welfare No. 6 Act, which subsidized early interventions for children with special needs at the age of 6 or under. However, ABA therapy is excluded from the subsidy program (Ministry of Health and Welfare, 2016).

Obstacles that prevent the growth of ABA intervention in Taiwan

Most therapists are lack of experience.	Most of the ABA therapists in Taiwan received around 40 hours of practical training in a period of 3 to 6 months. In order for them to gain experience in treating various types of problem behaviors and individuals with different diagnoses, they usually spend very little time on each case. This prevents them from developing a thorough understanding of the individual, it also limits their opportunities to practice their knowledge and techniques.
Misconception about ABA intervention	Many parents believe ABA is only for animal training and uses edible reinforcers all the time. These misconceptions come from improperly trained therapists, unprofessional teachers, and medical doctors.
The expensive cost of ABA therapy	The cost of ABA is range from NT\$400 to NT\$1500 per hour (US\$13-50/hour) in Taiwan. And each case usually requires at least 6 session hours per week. Hence, this could be a financial burden for many families.

“ A lot of therapists have the knowledge but do not have enough experience; therefore, many of them have told me that their real learning began on the first day of their work.”

—Yuan, personal communication, March 5, 2017

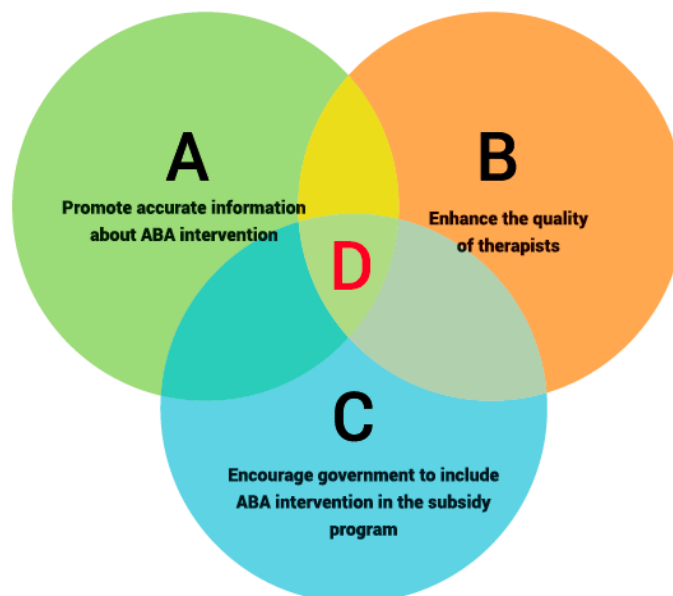
“ ...the reason that ABA is not a common treatment is because of its high cost”

—Jin Xin, personal communication, March 20, 2017

“ There are still some parents have a false belief about ABA treatment. Such as ABA therapy is for training animals and it only uses food to reinforce desired behaviors.”

—Yuan, personal communication, March 5, 2017

RECOMMENDATIONS



A. Promote accurate information about ABA intervention

ABA professionals and organizations should proactively reach out to the public and deliver accurate information about ABA intervention. This can be done by holding conferences and giving speeches about ABA intervention. It is critical to educate the public about ABA therapy as well as its efficacy because this will clarify their misunderstanding about this intervention as well as encouraging them to seek such service. It is also important to disperse accurate knowledge about ABA therapy to educators and medical professionals because gaining their supports will help the government to recognize the significance of ABA intervention. In addition, ABA service organizations should ensure their therapists are properly trained for designing and implementing behavior treatments that meet their patients' needs.

B. Enhance the quality of therapists

The Ministry of Health and Welfare should include ABA intervention in their early intervention subsidy program because ABA is proven to be a highly effective intervention for treating children with developmental disabilities, and it is strongly recommended for children to begin their treatment as young as possible. If ABA intervention is subsidized by the program, this will greatly help many families with developmentally delayed children, and it will also encourage these children to seek help from ABA intervention.

C. Encourage government to include ABA intervention in the subsidy program

The ABA preparatory programs should provide their students with extensive training opportunities for strengthening their skills and knowledge. The training hours should be at least 40 hours per month and for a duration of a semester. The training needs to be conducted in various settings as well as with individuals who have different needs. The Ministry of Health and Welfare, ABA service organizations and educational institutions should work together to come up a curriculum that strictly focuses on building students practical skills. Moreover, the Ministry of Health and Welfare should develop an evaluating system that oversees the quality of service and enforce the service center to meet the standard.

D. The Achievement of increasing access to ABA intervention in Taiwan.

The Taiwanese government, organizations, and educational institutions must work together and address all of these concerns in order to facilitate the growth of ABA intervention.



FROM THE AUTHOR

The reason I am proposing these recommendations to you is because your understanding and support will help to bring a brighter future to children with special needs in Taiwan.

In my experience as a behavior therapist, I observed profound improvements in my clients after they received ABA interventions. This intervention helped them to become more independent by strengthening their socially significant skills. Seeing these positive changes in my clients as well as learning about the promising findings in the literature of ABA intervention, I strongly believe all

children with developmental disabilities should be able to access to this highly effective treatment.

Unfortunately, ABA intervention is not widely practiced in Taiwan. It is also not recognized by the Taiwanese government and the majority of people in Taiwan. The lack of this treatment adversely impacted a large population of developmentally delayed children, preventing them from achieving a better quality of life.

Hence, there is a desperate need to increase access to ABA intervention for children with special needs in Taiwan. And your support is an important step for making it happened.



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Appendix B

Interview Transcriptions

Teacher Jin Xin

Q:

There are only few ABA service providers in Taiwan. And Taiwanese government has been proactively promoting early intervention and setting up clinics for early intervention around the country, but ABA therapy is not included in these programs. Through this phenomenon, we can see that ABA therapy is not as common as it is in the United States. Why do you think this is happening?

A:

Because Taiwan is a small country, the reason that ABA is not a part of government's policy is because it is not recognized as a valid treatment as well as the large profit from parents paying for ABA treatment out of their pockets.

Taiwan has BCBAs, but only Dr. Yuen attended the school in the United States, other BCBAs in Taiwan received their education via online courses from the US. Although they passed the BACB exam, and got their licenses, they are lack of real and formal clinical training.

Moreover, like the occupational therapists who graduated from Taiwanese universities. Their education level is only equivalent to the OT technicians from the college level in the US. But they are still allowed to conduct the level of job that requires a master degree in the United States. I personally do not recommend our government to include this treatment with questionable quality in the early intervention system.

Q:

In California, the health insurance companies have to cover the cost of ABA treatment for patients under 18 years old. If Taiwan adopts the same strategy, do you think this will help the development of ABA in Taiwan?

A:

The health insurances companies cover the cost of ABA treatment but also oversees the performance of these services providers. ABA in Taiwan is still in the infantile phase. There is not a system that oversees these providers. And it has already become a business, rather than a type of intervention. Most of the licensed behavior analysts have never participated in the clinical trainings in The US, which has a better monitoring system. Without a good monitoring system that strictly controls the quality of ABA

service and the behavior analysts, it is not wise to have health insurance cover the cost of treatments.

Under the commercialization of ABA in Taiwan, the reason that ABA is not a common treatment is because of its high cost. Looking through economic perspective, if ABA is a high profit product, there will be not a service provider wanting to provide a good quality ABA treatment because they will want to find more 'customers'

If you want to promote ABA in Taiwan, I encourage you to really understand how to promote the quality of the ABA service in Taiwan. As I have pointed out, there is not a monitoring system to oversee the quality of ABA treatment as well as the qualification of the service providers. Taiwan needs more licensed behavioral analysts that have a solid clinical training experience.

Dr. Yuen, BCBA-D

Q:

What is your insight about ABA intervention in Taiwan?

A:

Currently, there are not any subsidies and supports from the government to ABA intervention because the government has not yet recognized this intervention. Only occupational therapy, speech therapy, and some other forms of psychological therapies are included in the early intervention program. Hence, if people in taiwan want to seek this kind of service, they will reach out to the private ABA service providers.

When I began working in Taiwan in 2007, I was the only BCBA. But after a few years, the number of BCBA or BCABA have grown due to the growing knowledge about this intervention. There are some ABA courses and programs in Taiwan to train people to become BCBA or BCABA. And mostly people open their own clinic or work at the private service providers after they graduate.

Q:

How did your clients know about your service? What are some of the obstacles?

A:

The parents of my clients usually seek my helps after they have heard my speeches or read my books or through other clinician and teachers, who I had worked with

previously. The network of parents with developmental disorder children in Taiwan is strong, they share information to each other, and so many of my clients are referrals of my other clients' parents. Mostly by word of mouth. A lot of people understand the effectiveness of ABA treatment to children with Autism Spectrum Disorder. So when many parents learned about the diagnosis of their children, they know they can seek helps from ABA service providers. The number of parents seeking ABA treatment has grown in recent years.

However, there are still some parents have false beliefs about ABA treatment. Such as ABA therapy is for training animals and it only uses food to reinforce desired behaviors. In my center, we rarely use food as reinforcers. The impression about ABA therapy among the parents is quite polarized. Some parents learned about ABA from some unprofessional teachers and this facilitated their misunderstanding about ABA; however, there are also some parents from my center share accurate information about ABA to other parents, that help them to understand what ABA is truly about. So I think the most important thing is to have well trained ABA therapists who design an effective program to meet their clients' needs, that effectively improve these children's behaviors, and deliver accurate knowledge about ABA to the parents. Otherwise, there are some parents who have misconceptions about ABA therapy and these misconceptions are usually from unprofessional teachers and medical professionals who don't understand ABA.

Q:

How did you promote ABA intervention?

A:

My only ways to promote ABA therapy are two methods. One is through writing. I write articles for *Parenting* magazine. I am a blogger for this magazine, so I write articles for them every month. So I think writing is a great way to promote ABA. Another method is writing a book. I have written many books in Taiwan. But the fastest way is to give speech about this subject. Some medical entities have invited me to give speeches about ABA, even though they do not have ABA. They have begun to recognize the significant of ABA therapy. I also have been invited to talk about ABA by some organizations, associations, and foundations. Therefore, giving speech about ABA is an effective way to promote this approach. I also provide ABA classes for parents every month at my center. This a great way to help parents have a clear and accurate understanding about ABA therapy.

Establishing a ABA service center in Taiwan is not easy because in the earlier years, there weren't many people accepting ABA. I have an easier experience in opening a service center because I had written some books and given speeches so there were people

already knew me. So it was not that hard for me to open a better scale services center. Well...it's still not a really big scale since I only have 8 therapists, and we can only provide services to 8 students in one session, but my center is quite spacious. For most of the therapists, they usually can only establish a small scale clinic or work for other private service providers. If you want to establish a really big scale service center, it is going to be challenging since you can only provide treatment for few students at one time. Our center has been established for 6 years. Although the government does not recognize this treatment, there are still a lot of children coming to our center for the service because many people already learned about us, so there is a waiting list of potential clients who want to be treated by us. In my center, there are many teachers with different backgrounds; some of them are occupational therapists, and some are speech therapists. We also have trained many behaviorists, but many of them decided to leave and open their own clinic after they became certified.

Q:

What do you think about having the National Health Insurance system to cover the cost of ABA intervention in Taiwan?

A:

In here, many therapists do not like to work for medical entities. Because of National Health Insurance's reason, these therapists face many restrictions. For example, every month therapists must treat a certain number of clients in order for their earning to get raised. The quality of the treatment will be compromised because they are only allowed to have 30 minutes for each session. And they do not really get break time in between. The number of clients per day for each therapist can be more than 10 if they also take group sessions. Because National Health Insurance has a lot of restrictions as well as the requirement for number of clients they have to treat each month, many therapists only take private cases. Having the insurance covered the cost of ABA may sound beneficial to parents, it actually gives a lot of pressure to the therapists.

National Health Insurance does not cover ABA since the government does not recognized ABA intervention. If we want the insurance to cover it, we must begin with university, that means establishing more ABA programs. Currently, the available courses in the universities are mostly about Behavior Modification, there are only a few teach ABA.

Having the National Health Insurance to cover the cost of ABA is not going to work because it will have so many restrictions. And due to ABA's requirement for extensive treatment hours, National Health Insurance will not cover this treatment. For example, it covers occupational therapy, but only for 30 mins per week. 30 mins is totally not enough for one ABA treatment session. The range for the cost of ABA is NT\$400 to NT\$1500,

depending on the therapist's experience and certification. It is about the same price as occupational therapy, which has the range of NT\$1000 to NT\$2000. In my center, we charge about \$1000 for each treatment hour, this is about US\$30. This is not expensive; however, ABA treatment requires at least 6 treatment hours each week. This is why some parents complained about the cost of ABA intervention.

Q:

What are the diagnoses of your clients?

A:

Most of my clients have ASD, some of them are developmentally delayed, verbally delayed or at the borderline.

Q:

What are other services you provide at your center?

A:

In my center, I also provided OT, ST, and parent training. Parent training is important because it allows parents to use proper ABA methodology to teach their children at home. They learned how to